

Product news release

## Fives launches the Landis Twin Turret second-generation at IMTS 2016

June 2016 – Fives’ high-precision Universal Landis Twin Turret grinding machine will be showcased at IMTS 2016 in Hall B of the North Building (Booth 7018). The newly configured design provides a common platform for multiple machine configurations and processes. It is far stiffer than conventional machines, features remarkable thermal stability, and offers a compact machine footprint.

### Multifunctional machines for challenging applications

Fives’ longtime grinding expertise, in conjunction with its history alongside the Landis and Cranfield Precision range of products, led to the development of the Universal Twin Turret grinder.

**Machines suited to various applications**

The Landis Twin Turret (LTT) series machines are designed for superabrasives, and perfectly suited to process extremely challenging materials and geometries common in various industries and markets such as aerospace, automotive, fuel systems as well as optics and precision components. This model provides a common platform for multiple machine configurations and processes, including OD, ID and profile grinding, milling, polishing, hard and diamond turning, dicing, and in-situ metrology. Supplied in two sizes, the LTT-100 and LTT-400 are multifunctional machines that handle workpieces as large as 100 mm and 400 mm in diameter, respectively.

### A unique configuration providing enhanced accuracy

**Combination of rotary and linear axes**

The Universal Twin Turret grinder enables sub-micron position control. Two rotary axes are rigidly mounted on a fixed center distance and provide relative motion between the component and cutting tool, with the linear axis used to control the depth of cut and profile shape of the component being machined. Its unique combination of rotary and linear axes produce relative motion between tool and workpiece over a swept working area.

### Machines offering versatility

This machine concept is radically different, as it coordinates the two rotary axes and a short linear axis in a Twin Turret design to provide far stiffer results than standard machines, as well as remarkable thermal stability. Gone are the inherent thermal stability and stiffness issues that plague conventional machine platforms using stacked linear axes.

**Prevents thermal distortions**

The twin turret design enables a simple non-contacting labyrinth seal, making the machine base almost immune to distortions. A far cry from traditional machine designs that suffer from the ever-changing coolant return path and heat transference from the grinding process, resulting in constant variable machine distortions.



The LTT was designed to use the minimum number of bearing interfaces in the machining loop, to maximize machine loop stiffness. Two highly damped hydrostatic bearings are employed and the machine's turrets are bolted together via a solid granite base plate to resist machining forces and improve precision and repeatability.

The unique configuration of the LTT also provides a compact machine footprint that is typically 40 percent smaller than similar machines. This frees up more room on the job shop floor for other workpieces, additional work-flow margin, and/or space for inventory.

The Landis Twin Turret machine will be displayed at IMTS 2016 in the Fives booth, 7018, in Hall B of the North Building.

For additional information, see: [grinding.fivesgroup.com](http://grinding.fivesgroup.com)

#### About Fives in Grinding | Ultra Precision

The Group and its Grinding | Ultra precision dedicated teams - around 650 people in Italy, the U.K. and the United States - offer a complete range of grinding machines, plus a comprehensive line of systems, grinding accessories and service/support programs.

Known worldwide for leading-edge automotive camshaft and crankshaft processing systems, Fives is also a leader in centerless grinding and disc grinding processes as well as lean and flexible CNC grinders for a wide range of shaft-type components for various industries. With a strong legacy based on 4 major brands of the market - Bryant, Cranfield Precision, Landis and Giustina, and more than 200 years of expertise developing pioneering solutions in close partnership with customers, Fives is recognized as the leading provider of grinding and ultra-precision solutions - a partner that helps customers maximize operational performance.

#### About Fives

Fives is an industrial engineering Group with a heritage of over 200 years of engineering excellence and expertise. Fives designs and supplies machines, process equipment and production lines for the world's largest industrial groups in various sectors such as aluminum, steel, glass, automotive, logistics, aerospace, cement and energy, in both developing and developed countries.

In all these sectors, Fives designs and manufactures equipment and innovative solutions, which better anticipate and meet the needs of its customers in terms of performance, quality, safety and respect for the environment.

In 2015, Fives achieved a turnover of 1.7 billion Euros and employed 8,300 people in over thirty countries



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